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FAX TRANSMISSION COVER SHEET**DATE: December 20, 2001****TO: Heather Murphy****FAX NUMBER: 602-364-0925****NUMBER OF PAGES (including cover sheet): 10****RE: Case Number W-01656A-980577**

Arizona Corporation Commission

DOCKETED**DEC 20 2001**

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Heather:

Per my voice message today, I am faxing a rebuttal to Donald Coleman's submittal about the above mentioned case. His commentary was referred to during the May 11, 2001 hearing. Please distribute to all ACC commissioners. Thank you very much.

Bob Jones

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December 21, 2001

Arizona Corporation Commission
Chairman, William Mundell
Commissioner James Irvin
Commissioner Mark Spitzer
1200 West Washington
Phoenix, AZ 85007-2996

Re: Case Number W-0165A-980577
Rebuttal to Donald Coleman's A Critique of "CAP Water in Sun City"

Dear Commissioners:

In 2001, the Sun City's Homeowners Association published an information booklet for the community called "CAP Water in Sun City." This booklet was approved and funded by a grant by ADWR. The purpose was to provide educational materials for the community regarding water issues relating to Sun City. The booklet explains what CAP water is and how it can be used. It further shows how the CAP Task Force (convened in 1998) arrived at its decision, which was that the best use of CAP water for the Sun Cities and Youngtown was to use it as irrigation on the golf courses. Donald Coleman prepared a critique of the booklet and sent copies to the Arizona Corporation Commission and Citizens Water Resources. His critique was referred to by Commissioner Spitzer at the ACC hearing on May 11, 2001.

As a retired professional geologist and civil engineer, an active member of the CAP task force, and chairman of the Sun City West Water Committee, I want to explain to the ACC that in matters of technical expertise, Mr. Coleman's report shows him to be completely out of his field. The report he prepared is often inaccurate and misleading.

I do not know what Mr. Coleman's credentials are, but he is listed in the Sun City Official Homeowners Directory as a "safety engineer." He did not sign or seal or even put his name on A Critique of "CAP Water in Sun City." If it had not been for the thank you letter he submitted to the ACC, I would not have known the origin of this work.

I did not submit this rebuttal sooner (although I had written it on June 26, 2001) because of all the delays in hearing this case due to the lawsuit brought by the Sun City Taxpayers Association. On advice of counsel, I waited until now to submit it to you. Thank you in advance for your time in reviewing this matter.

Sincerely,



Robert L. Jones
Chairman, Sun City West Water Committee

Rebuttal to Donald Coleman's A Critique of "CAP Water in Sun City"

Item 1, "Re PAGE 1" -- ADWR data referenced by Coleman, "one-third of the groundwater pumping....is due to Municipal and Industrial use...two thirds of the pumping is for agricultural use," refers to the entire Phoenix AMA. These figures or ratios would not apply to the highly urbanized areas of the Sun Cities and the western Salt River Valley where these communities are located. Historically, pumping rates have far exceeded rates of replenishment or recharge to the alluvial aquifer system. From 1900 to 1983 groundwater pumping throughout much of the western Salt River Valley had caused groundwater levels in wells to decline more than 300 feet. By 1991, a deep cone of depression extended from west of Glendale to the areas of Sun City and Sun City West. (Herbert H. Schumann, Utilization of Central Arizona Project Water on Golf Courses in Sun City and Sun City West, AZ, September, 1999.) ADWR's digital groundwater flow model in 1995 indicated that continued groundwater depletion will occur in the northern part of the western Salt River Valley.

Item 2, "PAGE 2" -- First of all Coleman's assumption that "power required for well pumping is proportional to the depth-to-water" is not true. Secondly, the "five and one-half inches" has no scientific foundation. ADWR's computer model predicts a decline of 7.14 feet (85.68 inches) per year from 1983 to 2025 in the northern part of the western Salt River Valley.

Item 3, "PAGE 2" -- The item refers to two paragraphs in the HOA report re subsidence and concludes that, "The only thing that will stop the spread of subsidence in the direction of Sun City is to substantially reduce pumping groundwater from beneath our community." Coleman presents such a hodgepodge of misinformation in attempting to disprove this statement as "lacking in substance," that it is difficult to address his

These Schumann studies are available to the general public and always have been. Coleman makes subsidence sound very complicated. However as Schumann states, "Groundwater depletion has caused the aquifer system to compact and aquifer compaction has produced large areas of subsidence in the west Salt River Valley. Land subsidence is the permanent lowering or the sinking of the land surface that results from fluid withdrawal or subsurface mining activities. Land subsidence is a natural geologic process which has been accelerated by the depletion of the alluvial aquifer in the western Salt River Valley."

Item 8. "Re PAGE 3" -- This item is identified only as "Beginning with....." I will assume Coleman means the last paragraph on page 3. This paragraph merely states that, "as water is withdrawn from beneath Sun City, and the underground water table drops, there is an increasing opportunity for very salty (i.e. highly mineralized) underground water to migrate north toward Sun City." This is a true statement especially considering the size of the salt dome east of Luke AFB and the rate at which the groundwater has declined from 1900 to 1983. Again, Coleman presents irrelevant statements.

Item 9. "Re PAGE 4" -- The second sentence is absolutely correct as written. Coleman cannot spell alluvium let alone understand compaction and subsidence.

Item 10. "Re PAGE 4" -- The Northwest Valley Water Resource Advisory Board was formed on April 11, 1996, by Gov. Symington to

- Act as a forum for various interests around the Sun Cities area to coordinate water planning efforts and
- Advise and provide comment to ADWR, PAMA, other governmental agencies and the interested public on water management issues of importance to the Northwest Maricopa County Region.

This Board consisted of elected members from the Sun Cities as well as other representatives. I served on the Board from its inception until it disbanded. I served as Vice Chairman as well as Chairman, and I do not recall nor have I found any record of what Coleman alleges. This Board never had access to any CAP water and was not involved in any CAP water issues.

Item 11. "Re PAGE 4" -- HOA has no obligation to produce calculations to satisfy Coleman. They have hired a recognized authority on subsidence, Mr. Herbert Schumann who has made reports for them. Schumann's reports are far more effective than calculations, and I am certain he has done the necessary computation to back up his report. He is a recognized professional. Where does Coleman's experience and expertise come from?

The alluvial deposits, which make up the aquifer in the Sun Cities area are not a laboratory soil such as sand, silt or clay. It is a mixture of everything from clay to boulders. (There are grain sizes ranging from the smallest to the largest.) These materials change in all directions. Therefore, one would have to make assumptions and averages as to unit weight, modulus of elasticity, etc. While it is true that "water seeks its own level," this action is also governed by restraints such as time (groundwater moves at a rate of a few feet per year) and horizontal and vertical impermeable barriers.

- Neither the Task Force or HOA have made any statement that "unpumped groundwater under Sun City will remain there even if the water level of our neighbors recedes."
- What they did say was that "overdrafting of groundwater had caused groundwater levels to decline 300 feet."
- ADWR's computer model predicts a groundwater level decline of 7.14 feet per year from 1985-2025.

Item 12. "Re PAGE 6" -- No Comment

Item 13. "Re PAGE 7" -- Coleman says there was a "flaw in the entire CAP proceedings." If there was a flaw, it was not apparent to the Task Force, nor was it ever mentioned by Coleman. As a matter of fact, he signed the final report.

I would agree that Coleman had a limited knowledge of the basin and range province of Arizona as well as of the groundwater regime located therein. However, we had several presentations at the Task Force meetings by professional geologists, and I personally was constantly bombarded with technical questions from members. Again, Coleman makes the false accusation that the Task Force and HOA believed "that if we shut down some golf course pumps, the unpumped groundwater would accumulate down below." What HOA says throughout the report is:

- "That amount of water (4,189 acre/feet) [the Sun Cities CAP allocation] is a relatively small portion of Sun City's overall residential needs, but is a significant offset to the groundwater pumping now being done in the local area."
- "Any reduction in groundwater pumping will help the situation."
- "Using CAP water on the golf courses in Sun City will bring about an equivalent reduction in the pumping of groundwater from beneath our community. This reduction in the pumping of groundwater will, in part, allow the underground aquifer to recover from the present overdrafting and reduce the rate of decline in the groundwater table."

It appears that any and all verbiage relative to "accumulation or buildup of unpumped groundwater under Sun City" originated with Coleman.

Many members in attendance at the Task Force meetings expressed an interest in local geology as well as our alluvial aquifer. I loaned to colleagues many books and publications. Coleman seems to know an awful

lot about a meeting he did not attend.

For the record, the Task Force, composed of all retirees except for Ray Jones, Terri Sue Rossi and William Beyer, had members with backgrounds in law (2), medicine (1 MD), water economy (1 Ph.D.) geology and civil engineering (3). If a member did not understand the technical aspect of a particular point or problem, he/she asked for and received an explanation.

Item 14. "Re PAGE 7" -- The aquifer, which is composed of alluvial deposits, does not function as an "incoming tide" which "raises all ships." There are many professional engineers, geologists and hydrologists who believe the CAWCD's Agua Fria Recharge Project may never impact the aquifer serving the Sun Cities, and even if it did, it would take decades. We can definitely provide relief to our aquifer by cutting back on our groundwater pumping. This is possible by replacing the groundwater pumped for our golf courses with CAP water. The results are immediate and positive.

I don't believe the "biased/unbiased" argument deserves comment.

Item 15. "PAGE 8" -- Coleman continues with the false and tired accusation that the Task Force and HOA believe the "saved" groundwater under Sun City "accumulate[s] there." See Item 13 above.

All of the quotations cited by Coleman are true and valid. However, they apply to laboratory conditions of homogeneous materials and certainly not to an aquifer of alluvial deposits.

Item 16. "PAGE 8" -- The Task Force met from February 17 through May 19, 1998. There were 12 sessions (Coleman missed 2) of about 3 hours duration. A total of 16 experts or consultants presented data. For those of us who attended all the meetings and did our homework, it was indeed "a

great deal of study."

The "Final Report of the CAP Task Force" is available to any interested party.

Item 17. " Re page 8" -- As I recall, the engineers who said the golf course project was simple are Dess Chappelle and Bob Jones (yours truly), both professional engineers. One of the simplest design and construction projects is a non-potable pipeline.

Adding the Sun Cities' CAP allotment to the CAWCD recharge project does not guarantee the Sun Cities any benefits. There is no question that any CAP water that is introduced into the aquifer will benefit that aquifer. What we do not know is if it will benefit the Sun Cities' aquifer, and we must have insurance that it does before committing ourselves to that use. But, putting CAP water directly onto our golf courses, thereby enabling us to shut our pumps down even part time, will certainly be beneficial to the aquifer.

Item 18. "Re page 8" -- This absurd statement by Coleman has already been answered. If anyone on the Task Force does not understand "groundwater movement," it is Coleman.

Item 19. "Re page 8" -- Obviously, Coleman did not review the CAP Task Force report or he would not have signed it. I am convinced that Coleman understands "egregious."

Robert L. Jones
Professional Geologist and Civil Engineer, Ret.
Chairman, Sun City West Water Committee
Member CAP Task Force

June 26, 2001